

**COMSTOCK HOMES DEVELOPMENT AND
ELLWOOD MESA OPEN SPACE PLAN FEIR**

Appendix D

*Air Quality
Data*

Appendix D

Air Quality - URBEMIS Modeling Output Files

This appendix includes the air quality modeling output files for the operations phase, with and without wood burning stoves.

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URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockarea.urb
Project Name: Comstock Area Sources
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	4.00	0.99	1.37	0.03	0.00

Page: 2

URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockarea.urb
Project Name: Comstock Area Sources
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	3.89	0.98	0.42	0.00	0.00

Page: 3

URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockarea.urb
Project Name: Comstock Area Sources
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.72	0.18	0.16	0.00	0.00

URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockarea.urb
 Project Name: Comstock Area Sources
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.08	0.98	0.42	-	0.00
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fireplaces	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	3.82	-	-	-	-
TOTALS(lbs/day,unmitigated)	3.89	0.98	0.42	0.00	0.00

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The fireplcase option switch changed from on to off.
 The landscape option switch changed from off to on.

URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockarea.urb
 Project Name: Comstock Area Sources
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.08	0.98	0.42	-	0.00
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.11	0.01	0.95	0.03	0.00
Consumer Prdcts	3.82	-	-	-	-
TOTALS(lbs/day,unmitigated)	4.00	0.99	1.37	0.03	0.00

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The fireplace option switch changed from on to off.
The landscape option switch changed from off to on.

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URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockarea.urb
Project Name: Comstock Area Sources
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES

Source	ROG	NOX	CO	SO2	PM10
Natural Gas	0.01	0.18	0.08	-	0.00
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fireplaces	0.00	0.00	0.00	0.00	0.00
Landscaping	0.01	0.00	0.09	0.00	0.00
Consumer Prdcts	0.70	-	-	-	-
TOTALS (tpy, unmitigated)	0.72	0.18	0.16	0.00	0.00

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The fireplace option switch changed from on to off.
The landscape option switch changed from off to on.

Page: 1

URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockareawood.urb
Project Name: Comstock Area Sources with Wood Burning
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	4.00	0.99	1.37	0.03	0.00

Page: 2

URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockareawood.urb
Project Name: Comstock Area Sources with Wood Burning
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	111.67	5.17	260.32	0.69	39.88

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URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockareawood.urb
Project Name: Comstock Area Sources with Wood Burning
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	5.14	0.35	10.82	0.03	1.64

URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockareawood.urb
 Project Name: Comstock Area Sources with Wood Burning
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.08	0.98	0.42	-	0.00
Wood Stoves	20.41	3.20	163.53	0.53	26.68
Fireplaces	87.37	0.99	96.37	0.15	13.20
Landscaping - No winter emissions					
Consumer Prdcts	3.82	-	-	-	-
TOTALS(lbs/day,unmitigated)	111.67	5.17	260.32	0.69	39.88

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The wood stove option switch changed from off to on.
 The landscape option switch changed from off to on.

URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockareawood.urb
 Project Name: Comstock Area Sources with Wood Burning
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.08	0.98	0.42	-	0.00
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.11	0.01	0.95	0.03	0.00
Consumer Prdcts	3.82	-	-	-	-
TOTALS(lbs/day,unmitigated)	4.00	0.99	1.37	0.03	0.00

Page: 7

Changes made to the default values for Land Use Trip Percentages

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URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockareawood.urb
Project Name: Comstock Area Sources with Wood Burning
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES

Source	ROG	NOX	CO	SO2	PM10
Natural Gas	0.01	0.18	0.08	-	0.00
Wood Stoves	0.84	0.13	6.70	0.02	1.09
Fireplaces	3.58	0.04	3.95	0.01	0.54
Landscaping	0.01	0.00	0.09	0.00	0.00
Consumer Prdcts	0.70	-	-	-	-
TOTALS (tpy, unmitigated)	5.14	0.35	10.82	0.03	1.64

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The wood stove option switch changed from off to on.
The landscape option switch changed from off to on.

comstockvehicle

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URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockvehicle.urb
 Project Name: Comstock Vehicle Sources
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Summer)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	9.89	14.03	115.81	0.12	11.19
TOTALS (lbs/day, mitigated)	8.65	12.16	100.27	0.10	9.70

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URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockvehicle.urb
 Project Name: Comstock Vehicle Sources
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	12.19	18.12	130.51	0.11	11.19
TOTALS (lbs/day, mitigated)	10.55	15.71	113.05	0.10	9.70

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URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockvehicle.urb
 Project Name: Comstock Vehicle Sources
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Tons/Year)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	1.94	2.81	22.03	0.02	2.04
TOTALS (tpy, mitigated)	1.69	2.44	19.08	0.02	1.77

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comstockvehicle

URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockvehicle.urb
 Project Name: Comstock Vehicle Sources
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
single family housing	12.19	18.12	130.51	0.11	11.19
TOTAL EMISSIONS (lbs/day)	12.19	18.12	130.51	0.11	11.19

Includes correction for passby trips.
 Includes a double counting reduction for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
single family housing	9.57 trips / dwelling units	78.00	746.46

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The operational emission year changed from 2004 to 2005.
The travel mode environment settings changed from both to: residential
The default/noddefault travel setting changed from noddefault to: noddefault
Side Walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Most Destinations Covered
Street Trees Provide Shade: No Coverage
changed to: Street Trees Provide Shade: Moderate Coverage
Pedestrian Circulation Access: No Destinations
changed to: Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to: Visually Interesting Uses: No Uses within Walking Distance
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Most Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to: Pedestrian Safety from Crime: High Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to: Visually Interesting Walking Routes: High Level
Transit Service: Dial-A-Ride or No Transit Service
changed to: Transit Service: <15 Minute Bus within 1/4 Mile
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: High Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to: Bike Routes Provide Paved Shoulders: Most Major Destinations
Safe Vehicle Speed Limits: No Routes Provided
changed to: Safe Vehicle Speed Limits: Most Major Destinations
Safe School Routes: No Schools
changed to: Safe School Routes: University/College within Cycling Distance
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to: Uses w/in Cycling Distance: Large Number and Variety
Bike Parking Ordinance: No Ordinance or Unenforceable
changed to: Bike Parking Ordinance: Requires Secure Bike Parking
Mitigation measure Provide Sidewalks and/or Pedestrian Paths:1
has been changed from off to on.
Mitigation measure Provide Direct Pedestrian Connections:1
has been changed from off to on.
Mitigation measure Provide Pedestrian Safety:0.5
has been changed from off to on.
Mitigation measure Provide Street Furniture:0.5
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Provide Bike Lanes/Paths Connecting to Bikeway System:2
has been changed from off to on.

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URBEMIS 2002 For windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockvehicle.urb
Page 3

comstockvehicle
 Project Name: Comstock Vehicle Sources
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOX	CO	SO2	PM10
single family housing	9.89	14.03	115.81	0.12	11.19
TOTAL EMISSIONS (lbs/day)	9.89	14.03	115.81	0.12	11.19

Includes correction for passby trips.
 Includes a double counting reduction for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
single family housing	9.57 trips / dwelling units	78.00	746.46

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			

comstockvehicle

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The operational emission year changed from 2004 to 2005.
The travel mode environment settings changed from both to: residential
The default/nodefault travel setting changed from nodefault to: nodefault
Side walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Most Destinations Covered
Street Trees Provide Shade: No Coverage
changed to: Street Trees Provide Shade: Moderate Coverage
Pedestrian Circulation Access: No Destinations
changed to: Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses within walking Distance
changed to: Visually Interesting Uses: No Uses within walking Distance
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Most Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to: Pedestrian Safety from Crime: High Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to: Visually Interesting Walking Routes: High Level
Transit Service: Dial-A-Ride or No Transit Service
changed to: Transit Service: <15 Minute Bus within 1/4 Mile
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: High Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to: Bike Routes Provide Paved Shoulders: Most Major Destinations
Safe Vehicle Speed Limits: No Routes Provided
changed to: Safe Vehicle Speed Limits: Most Major Destinations
Safe School Routes: No Schools
changed to: Safe School Routes: University/College within Cycling Distance
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to: Uses w/in Cycling Distance: Large Number and Variety
Bike Parking Ordinance: No Ordinance or Unenforceable
changed to: Bike Parking Ordinance: Requires Secure Bike Parking
Mitigation measure Provide Sidewalks and/or Pedestrian Paths:1
has been changed from off to on.
Mitigation measure Provide Direct Pedestrian Connections:1
has been changed from off to on.
Mitigation measure Provide Pedestrian Safety:0.5
has been changed from off to on.
Mitigation measure Provide Street Furniture:0.5
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Provide Bike Lanes/Paths Connecting to Bikeway System:2
has been changed from off to on.

Page: 8

URBEMIS 2002 For Windows 7.4.2

File Name: D:\Santa Barbara\2004 comstock\comstockvehicle.urb
Project Name: Comstock Vehicle Sources
Project Location: Santa Barbara County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

comstockvehicle
DETAIL REPORT
(Tons/Year)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	1.94	2.81	22.03	0.02	2.04
TOTAL EMISSIONS (tons/yr)	1.94	2.81	22.03	0.02	2.04

Includes correction for passby trips.
Includes a double counting reduction for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 75 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.57 trips / dwelling units	78.00	746.46

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The operational emission year changed from 2004 to 2005.
The travel mode environment settings changed from both to: residential
The default/noddefault travel setting changed from nodefault to: nodefault
Side walks/Paths: No Sidewalks
changed to: Side walks/Paths: Most Destinations Covered
Street Trees Provide Shade: No Coverage
changed to: Street Trees Provide Shade: Moderate Coverage
Pedestrian Circulation Access: No Destinations
changed to: Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to: Visually Interesting Uses: No Uses within Walking Distance
Street System Enhances Safety: No Streets
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Pedestrian Safety from Crime: No Degree of Safety
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Visually Interesting Walking Routes: No Visual Interest
changed to: Visually Interesting Walking Routes: High Level
Transit Service: Dial-A-Ride or No Transit Service
changed to: Transit Service: <15 Minute Bus within 1/4 Mile
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Safe Vehicle Speed Limits: No Routes Provided
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Safe School Routes: No Schools
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Uses w/in Cycling Distance: No Uses w/in Cycling Distance
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Mitigation measure Provide Direct Pedestrian Connections:1
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Mitigation measure Provide Pedestrian Safety:0.5
has been changed from off to on.
Mitigation measure Provide Street Furniture:0.5
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Provide Bike Lanes/Paths Connecting to Bikeway System:2
has been changed from off to on.

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10820-00

Project Title: UCSB Ellwood Devereux EIR

Background Information

Nearest Air Monitoring Station measuring CO: Goleta-Fairview
 Background 1-hour CO Concentration (ppm): 0.0
 Background 8-hour CO Concentration (ppm): 1.9
 Persistence Factor: 0.6
 Analysis Year: 2007

Roadway Data

Intersection: Storke Road/Hollister Avenue
 Analysis Condition: Cumulative + Project Traffic Volumes

	Roadway Type	No. of Lanes	Average Speed	
			A.M.	P.M.
North-South Roadway:	Storke Road	At Grade	4	10
East-West Roadway:	Hollister Avenue	At Grade	4	10

A.M. Peak Hour Traffic Volumes

N	0	0	0	E
W	<	v	>	
0	^		^	0
0	>		<	0
0	v		v	0
S	0	0	0	

P.M. Peak Hour Traffic Volumes

N	1,015	615	115	E
W	<	v	>	
685	^		^	395
460	>		<	775
95	v		v	375
S	120	875	185	

Highest Traffic Volumes (Vehicles per Hour)

N-S Road: 0
 E-W Road: 0

N-S Road: 3,700
 E-W Road: 3,150

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	A ₁	A ₂	A ₃	B	C	Estimated CO Concentrations		
	Reference CO Concentrations 25 Feet	50 Feet	100 Feet	Traffic Volume	Emission Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	0	8.38	0.00	0.00	0.00
East-West Road	2.6	2.2	1.7	0	8.38	0.00	0.00	0.00
P.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	3,700	8.38	2.17	1.67	1.18
East-West Road	2.6	2.2	1.7	3,150	8.38	0.69	0.58	0.45

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	0.0	2.9	3.6
50 Feet from Roadway Edge	0.0	2.3	3.3
100 Feet from Roadway Edge	0.0	1.6	2.9

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).